

**REMARKS**

In the Office Action dated June 23, 2006, the Examiner raises a number of objections and rejections with regard to pending claims 1 through 11 and 13 through 19. First, the Examiner rejects the pending claims under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,787,435 to Burrows ("Burrows") in view of U.S. Patent No. 5,305,208 to Doi ("Doi"). The pending claims are also rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the Applicants regard as the invention. Claims 1 through 7 are further rejected under 35 U.S.C. 101 as being directed to non statutory subject matter. Finally, the Examiner objects to claim 13 on the basis of the use of the term "dispatch" therein. Applicants respectfully request reconsideration and withdrawal of the rejections and objections in light of the remarks below.

Regarding the objection to claim 13 on the basis of the use of the term "dispatch," Applicants would like to point out that the same term appears in claim 15. Accordingly, Applicants hereby amend claims 13 and 15 to replace the objected to term "dispatch" with the term "dispatcher" as per the Examiner's suggestion. Applicants assert that this amendment is the correction of a typographical error, does not introduce any new matter, and respectfully request entry regarding the same.

As indicated above, the Examiner rejects claims 1 through 7 under 35 U.S.C. 101, indicating that these claims are directed to non-statutory subject matter as they recite a mere arrangement of data without producing a physical transformation or any tangible result. Applicants respectfully traverse the Examiner's assertion. Specifically, as per claim 1, data is retrieved from a database and used to produce a primary index of the data items. These data items are mapped on to at least a first tier and a second tier based on respective rankings of the data items. At least a first

and second sub-index is produced from the primary index based on the mapping. The first and second sub-indexes are stored as claimed. The claim contemplates both data transformation (producing the primary index, mapping the data items, product at least a first and a second sub-index) and a tangible result (e.g., storing the first sub-index and the second sub-index).

Accordingly, Applicants respectfully request withdrawal of the rejection of claim 1 through 7 under 35 U.S.C. 101 as being directed to non-statutory subject matter.

The Examiner also rejects claims 1 through 11 and 13 through 19 under 35 U.S.C. 112, second paragraph. Specifically, the Examiner indicates in claims 1, 8, 11 and 13 that the recitation of the mapping element is vague and indefinite because data items have not been ranked before the rankings are used in the mapping element. Applicants hereby amend claims 1, 8, 11 and 13 to recite that a given data item is associated with a respective ranking. The amendments do not present any new matter and are supported by the specification as filed. Applicant respectfully requests withdrawal of the rejection with regard to claims 1, 11, 13 and the claims that are dependent thereupon, as well as allowance regarding the same.

In addition to the foregoing, the Examiner further rejects claim 8 on the grounds that the phrase “result data items” lacks sufficient antecedent basis. Applicants respectfully disagree with the Examiner’s contention that one or more of several steps could generate result data items. Indeed, the phrase “result data items” does not require antecedent basis as the term is introduced in the searching step. As the searching element states, the result data items relate to the search query. Applicants contend that the use of the term “result data set” is clear from the use of the term in both claim 8 and the claims that are dependent thereupon, and Applicants respectfully request withdrawal of the rejection and allowance regarding the same.

Regarding the rejection of claims 1 through 11 and 13 through 19, the Examiner states that these claims are obvious over Burrows in view of Doi in accordance with 35 U.S.C. 103(a). The Examiner additionally notes that the instant specification does not specifically define the terms “index” and “sub-index,” and relies on the definition as specified by the Microsoft Press Computer Dictionary, 3<sup>rd</sup> edition at page 247. While Applicants do not see the need at the present point in prosecution of the instant application to take a position with regard to the approach that the Examiner is adopting, Applicants respectfully reserve all rights to contest the Examiner’s approach insofar as it is inconsistent with law, or in view of additional or disparate dictionaries that may more accurately define these terms.

The Examiner states that Burrows fails to teach or suggest every element of independent claims 1, 8, 11 and 13. The Examiner further states that the elements missing from Burrows are present in Doi. Doi, however, fails to teach or suggest every element of claims 1, 8, 11 and 13. According to independent claim 1, a method for indexing data items in a database comprises, among other elements, storing the first sub-index in a first plurality of search nodes logically arranged in a first plurality of columns and storing the second sub-index in a second plurality of search nodes logically arranged in a second plurality of columns. Independent claims 8, 11 and 13 comprise substantially similar elements cast as method and system elements.

The portions of Doi upon which the Examiner is relying fail to teach or suggest these elements of the independent claims. According to Doi, “a logical memory section 33b stores a matrix (calculated by the information control section 39) in which all nodes are arranged in rows and columns, and nodes labeling a row represent input to a line (IN) and nodes labeling a column represent output (OUT) from a line.” Col. 4, lns. 62-67. First, the “nodes” to which Doi refers are not search nodes as claimed. According to Doi, a node is a label, which when appearing in row of a

matrix serves to label that row as an input to a line that appears in a technical drawing, as Doi generally discusses a presentation apparatus for effectively displaying the difference between two drawings. Col. 2, lns. 11-14. Second, there is no teaching or suggestion to store a sub-index in a search node. According to the claim, the first sub-index is stored in a first plurality of search nodes and the second sub-index is stored in a second plurality of search nodes. As Doi only discusses the use of nodes as labels for a column or row of a matrix, there is no teaching or suggestion to store a sub-index in a search node.

Doi also fails to teach or suggest storing a first plurality of search nodes logically arranged in a first plurality of columns and storing a second plurality of search nodes logically arranged in a second plurality of columns. First, as explained above, Doi does not teach or suggest search nodes storing a sub-index in a search node, but nodes that are labels that represent lines on a drawing. Second, Doi discusses storing a matrix, not a first plurality of search nodes logically arranged in a first plurality of columns and a second plurality of search nodes arranged in a second plurality of columns. Indeed, the matrix of Doi appears to teach away from the presently claims first plurality of columns and second plurality of columns. Accordingly, Applicants respectfully request that the examiner withdraw the rejections with regard to independent claims 1, 8, 11 and 13 as well as allowance regarding the same.

The dependent claims of the present application contain additional features that further substantially distinguish the invention of the present application over the prior art of record. Given the Applicants' position on the patentability of the independent claims, however, it is not deemed necessary at this point to delineate such distinctions.

For at least all of the above reasons, Applicants respectfully request that the Examiner withdraw all rejections, and allowance of all the pending claims is respectfully solicited.

To expedite prosecution of this application to allowance, the examiner is invited to call the

Applicants' undersigned representative to discuss any issues relating to this application.

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Respectfully submitted,



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